Installation and Operating Instructions

GALÚ® Range of Thermal Stores

IMPORTANT INFORMATION
Please read before mounting and taking into operation.

These Instructions for Use and Installation are designed for both the users and installation engineers of the accumulator tank. After installation has been completed please leave these instructions in the folder provided

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Preface

We would like to congratulate you on this decision to purchase a **GALÚ** Accumulator Tank. To ensure your continuous satisfaction and success with this **GALÚ** Product, please carefully read and fully understand the following installation and operating instructions.

GALÚ Products are founded on the knowledge that a heating system designed around an Accumulator Tank will represent significant energy saving over that of a traditional system. **GALÚ** Products are individually extensible heat storage units based on the most modern and up to date knowledge in the field of Accumulator Tank technology.

All **GALÚ** Accumulator Tanks benefit from our continuous development program and the long-standing practical experience of the **GALÚ** design team. The manufacturing process is governed by a rigorous quality control systems and the pressure safety of the tank is ensured through pressure testing in accordance with the Pressure Vessel Directive.

This manual does not purport to address all design, installation and safety considerations associated with the installation of a **GALÚ** Accumulator Tank. It is the responsibility of the user of this manual to determine the viability and safety of each application and ensure its compliance with local building regulations. Should more information be required, please contact the design team at **GALÚ** who will be more than happy to assist you.

- These instructions must be read before undertaking installation or maintenance of **GALÚ** Thermal Stores.
- Where a **GALÚ** Thermal Store is being used in conjunction with heat generation equipment, then these instructions must be read in conjunction with the instructions for this equipment.
- These instructions must be handed to the user following installation or maintenance.
- Please keep these instructions safe for future reference.

Functional Description

Your **GALÚ** Accumulator Tank is designed as a combination of domestic hot water on demand production and load-balancing buffer tank for optimising energy production and storage. The entire volume of the tank is heated by external heat sources such as e.g. electric, solar, solid fuel, heat pump, oil or gas boiler or any combination of these energy sources.

A **GALÚ** Accumulator Tank is a heat storage tank, which is a charged with heated water as part of a heating system. It will help to bring about a balance in the differentials between produced energy and the consumed energy and to regulate power fluctuations.
In that way the heat production can be provided largely independent from the consumption, thereby resulting in better operating performance and efficiency from all of the energy sources attached.

Transportation

The **GALÚ** Accumulator Tank is provided with two means of vertically lifting the tank.

Using a fork truck or pallet truck insert the forks under the tank taking care that the weight of the tank is adequately and evenly supported and then move the tank to its desired location.

Using the lifting lug screwed fully home into the top of the tank connect suitable lifting apparatus and then move the tank to its desired location.

Under no circumstances should any attempt be made to move the tank while it is filled with water.

Please ensure than there is no undue lateral force applied to the tank legs while moving the tank as this may damage them.

If it is necessary to move the tank in a horizontal orientation great care must be taken not to damage the copper ports and the powder-coated casing, it will be necessary to protect the tank with padding the sides.

Installation Location

The applicable building regulations and provisions must be complied with concerning the place of installation of your **GALÚ** Thermal Store.

The **GALÚ** Thermal Store must stand on a solid surface capable of supporting the weight of the tank when filled with water (see data sheet) and any resulting need to reinforce the floor slab should be taken into consideration. Please ensure that all door openings etc. are of an adequate size to accommodate the delivery and or removal of the tank.

The feet of the **GALÚ** Thermal Store can be adjusted to allow for uneven and un-level surfaces or where necessitated due to height restrictions.

The **GALÚ** Thermal Store should be positioned so that connections to the tank will not be too difficult for future maintenance to be carried out. The accumulator tank can be positioned against a wall as all the pipe-work connections are placed on one quadrant of the tank, access above and below is as required for making the relevant connections.

Maintenance

To ensure a long and trouble free operation of **GALÚ** Thermal Stores it is essential to carry out regular visual inspections, once per year should be adequate.

Important: Details of inspections should be entered in the service log at the back of this manual detailing the inspection date and signature of the inspector. This information may be required to validate the warranty.

During the inspection, all connections to the Thermal Store must be inspected:

If any leaks or anything else needing repair should be discovered during the inspection, it is imperative to contact a HVAC professional immediately as only a suitably qualified engineer should only carry out repairs and maintenance.

Every time water is added to the heating system, it must be verified there are no leaks.

Taking into Operation and Handing Over

It is vitally important that the entire heating and plumbing system including the **GALÚ** accumulator be thoroughly flushed to remove any foreign bodies or debris that may have been introduced during installation or manufacturing process. The system should only be filled with clean water containing appropriate concentrations of inhibitor.

Slowly fill the system to gradually reach the system pressure. Air discharge valves must be installed at all high points of the system, in order to achieve an optimal filling with water. During handover to the operator, the complete heating system as well as the individual functions must be explained. Also any installed heat control must be adjusted and its system functions explained to the system operator. A person qualified to do so should carry out the initial commissioning. Following longer shutdowns of the heating, the filling pressure of your heating system must be checked. In case of temperatures below the freezing point, please ensure that the entire system is frost-protected. Please also read the operating instructions of the heat control concerning frost protection. If the system is completely shut down in case of frost risk, it must be completely emptied of water.

If draining the tank is necessary, care must be taken to ensure that the Thermal Store receives sufficient air to replace the volume of water discharged!

Technical Specifications

Thermal Stores in the **GALÚ** range are suitable as heat reservoir in closed hot water heating systems with supply temperatures of up to 95° C. For all connections, main dimensions and other data, please refer to the data sheet. For the installation by your **GALÚ** System engineer, the guidelines and standards for hot water heating systems must be complied with. The maximum permissible system operating pressure must be limited to 3 bar (typically 1.5 bar) with a suitably specified safety valve. The same applies to the pressure in the heat exchangers. A pressure reducer must be installed, if the cold water pressure will exceed the working pressure of the system. This working pressure (typically 2 bar) is considerably lower than the permissible operating pressure of the heat exchangers (10 bar).

In order to achieve optimum heat conservation in your **GALÚ** Thermal Store, it is insulated with 100 mm Seamless Polyurethane Insulation at the top and sides. Finished with aesthetically pleasing design at the domed ends and equipped with a beautifully designed, powder-coated casing.

GALÚ **Classic Standard Ports and features.**

- Eight 1 ¼" B.S.P. Heat Generation, Heat Distribution Ports.
- One 2" B.S.P. Electric Resistor Port.
- One 1" B.S.P. Drain Port.
- One 1" B.S.P. Air Vent Port.
- Four ¾" B.S.P. Thermostat Port.
- Two flanged ports for the placement of finned copper Hot Water Coils.
- 100mm seamless polyurethane foam insulation.

GALÚ **Solar Standard Ports and features.**

- Six 1 ¼" B.S.P. Heat Generation, Heat Distribution Ports.
- Two 2" B.S.P. Electric Resistor Port.
- One 1" B.S.P. Drain Port.
- One 1" B.S.P. Air Vent Port.
- One ¾" B.S.P. Thermostat Port.
- Four 10mm Temperature Sensor Pockets.
- Two 13.1m Domestic Hot Water Coil, 22mm finned copper tube, structural pressure 10 bar.
- One 13.1m Solar Coil, 22mm finned copper tube, structural pressure 10 bar.
- Internal Stratification Baffle
- 100mm seamless polyurethane foam insulation.

GALÚ **Solar Advance Standard Ports and features.**

- Six 1 ¼" B.S.P. Heat Generation, Heat Distribution Ports.
- One 2" B.S.P. Electric Resistor Port.
- One 1" B.S.P. Drain Port.
- One 1" B.S.P. Air Vent Port.
- One ¾" B.S.P. Thermostat Port.
- Four 10mm Temperature Sensor Pockets.
- Two 13.1m Domestic Hot Water Coil, 22mm finned copper tube, structural pressure 10 bar.
- One 8mm Upper Solar Coil, 22mm finned copper tube, structural pressure 10 bar.
- One 13.1m Lower Solar Coil, 22mm finned copper tube, structural pressure 10 bar.
- Internal Stratification Baffle
- 100mm seamless polyurethane foam insulation.

GALÚ **HP Standard Ports and features.**

- Eight 1 ¼" B.S.P. Heat Generation, Heat Distribution Ports.
- Two 2" B.S.P. Electric Resistor Port.
- One 1" B.S.P. Drain Port.
- One 1" B.S.P. Air Vent Port.
- One ¾" B.S.P. Thermostat Port.
- Four 10mm Temperature Sensor Pockets.
- Two 14.7m Domestic Hot Water Coil, 22mm finned copper tube, structural pressure 10 bar.
- (Optional)13.1m Lower Solar Coil, 8m Upper solar coil. 22mm finned copper tube, structural pressure 10 bar.
- Internal Insulated Stratification Baffle
- 100mm seamless polyurethane foam insulation.

Dimensions

GALÚ Classic

Type	1. Flow & Return	2. Wet pocket	3. Resistor	4.Coil Hatch	4. Drain & Vent	D1 mm	H1 mm	Appox Weight	Max Pressure	Max Temperature
500	1 1/4"	3/4"	2"	190mm	1"	800	2050	160kg	3 bar	95º
750	1 1/4"	3/4"	2"	190mm	1"	950	2050	205kg	3 bar	95º
1000	1 1/4"	3/4"	2"	190mm	1"	1050	2100	235kg	3 bar	95º
1500	1 1/4"	3/4"	2"	190mm	1"	1250	2150	290kg	3 bar	95º
2000	1 1/4"	3/4"	2"	190mm	1"	1400	2200	340kg	3 bar	95º
2500	1 1/4"	3/4"	2"	190mm	1"	1500	2250	375kg	3 bar	95º
3000	1 1/4"	3/4"	2"	190mm	1"	1600	2300	420kg	3 bar	95º
4000	1 1/4"	3/4"	2"	190mm	1"	1800	2350	495kg	3 bar	95º
5000	2"	3/4"	2"	190mm	1"	2000	2500	630kg	3 bar	95º
6500	2"	3/4"	2"	190mm	1"	2200	2550	775kg	3 bar	95º
8000	2"	3/4"	2"	190mm	1"	2200	3050	950kg	3 bar	95º
10000	2"	3/4"	2"	190mm	1"	2400	3150	1150kg	3 bar	95º

GALÚ Solar

Type	1. Flow & Return	2. Dry pocket	3. DHW coil	4.Solar coil	5. Resistor	6. Wet pocket	7. Drain & Vent	D1 mm	H1 mm	Max Tank Pressure (standard)	Max Coil Pressure	Max Temperature
300	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	800	2050	3 bar	10 bar	95º
500	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	950	2050	3 bar	10 bar	95º
750	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1050	2100	3 bar	10 bar	95º
1000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1250	2150	3 bar	10 bar	95º
1500	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1400	2200	3 bar	10 bar	95º
2000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1400	2200	3 bar	10 bar	95º
2500	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1500	2250	3 bar	10 bar	95º
3000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1600	2300	3 bar	10 bar	95º
4000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1800	2350	3 bar	10 bar	95º
5000	2"	12mm	22mm	22mm	2"	3/4"	1"	2000	2500	3 bar	10 bar	95º

GALÚ Solar Advance

Type	1. Flow & Return	2. Dry pocket	3. DHW coil	4.Solar coil	5. Resistor	6. Wet pocket	7. Drain & Vent	D1 mm	H1 mm	Max Tank Pressure (standard)	Max Coil Pressure	Max Temperature
300	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	800	2050	3 bar	10 bar	95º
500	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	950	2050	3 bar	10 bar	95º
750	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1050	2100	3 bar	10 bar	95º
1000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1250	2150	3 bar	10 bar	95º
1500	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1400	2200	3 bar	10 bar	95º
2000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1400	2200	3 bar	10 bar	95º
2500	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1500	2250	3 bar	10 bar	95º
3000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1600	2300	3 bar	10 bar	95º
4000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1800	2350	3 bar	10 bar	95º
5000	2"	12mm	22mm	22mm	2"	3/4"	1"	2000	2500	3 bar	10 bar	95º

GALÚ Heat Pump

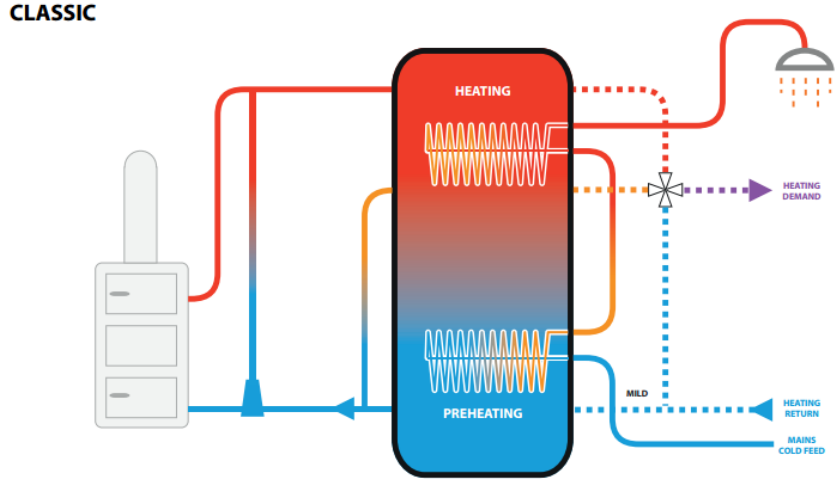
Type	1. Flow & Return	2. Dry pocket	3. DHW coil	4.Solar coil	5. Resistor	6. Wet pocket	7. Drain & Vent	D1 mm	H1 mm	Max Tank Pressure (standard)	Max Coil Pressure	Max Temperature
300	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	800	2050	3 bar	10 bar	95º
500	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	950	2050	3 bar	10 bar	95º
750	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1050	2100	3 bar	10 bar	95º
1000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1250	2150	3 bar	10 bar	95º
1500	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1400	2200	3 bar	10 bar	95º
2000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1400	2200	3 bar	10 bar	95º
2500	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1500	2250	3 bar	10 bar	95º
3000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1600	2300	3 bar	10 bar	95º
4000	1 1/4"	12mm	22mm	22mm	2"	3/4"	1"	1800	2350	3 bar	10 bar	95º
5000	2"	12mm	22mm	22mm	2"	3/4"	1"	2000	2500	3 bar	10 bar	95º

Heat Pump

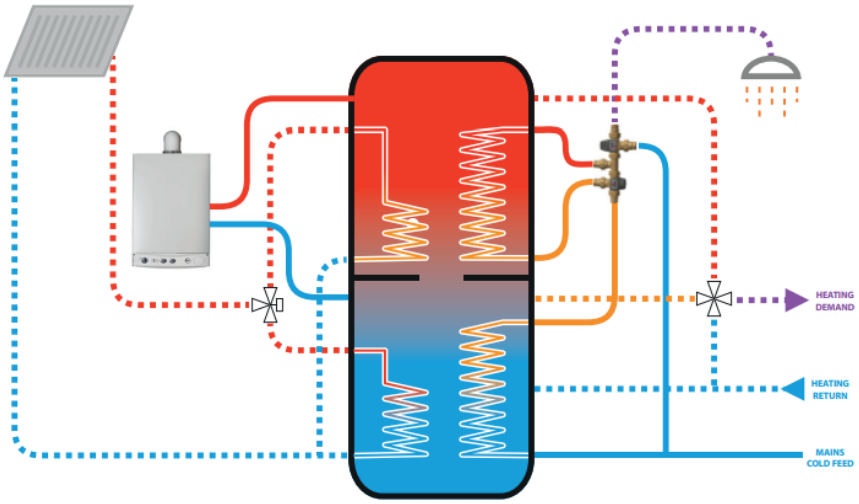
Heat Pump Solar

Sample schematics

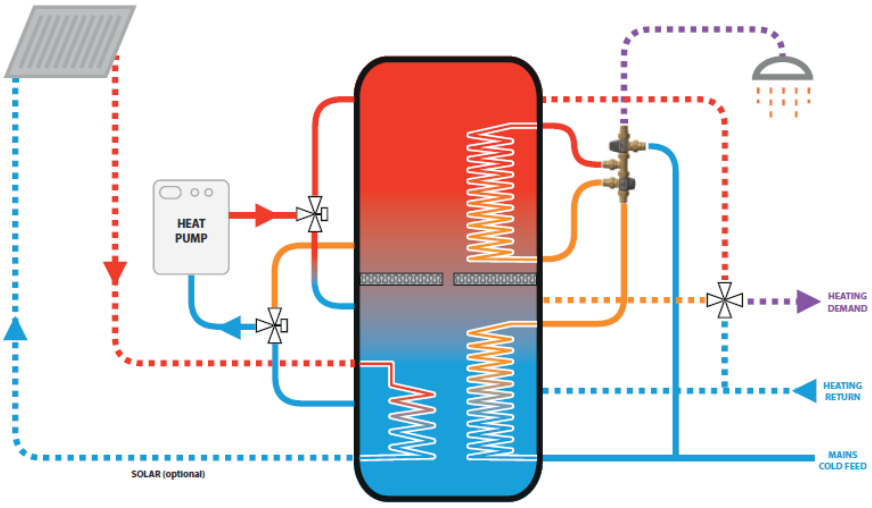
CLASSIC



SOLAR



HEAT PUMP



Terms and Conditions of Warranty

All GALÚ tanks come with a guarantee as outlined below:

The body of the tank including the polyurethane insulation layer is guaranteed against defective material for a period of 5 years.

All other components are guaranteed for 2 years.

Guarantees begin from the date of purchase. The following conditions apply:

The Buyer must examine the tank(s) upon receipt. Any defects or failures to correspond with that which was purchased must be reported to GALÚ within 7 days of delivery.

The tank must be installed and commissioned by a qualified and competent installer, in accordance with current building regulations and is maintained and serviced according to our recommendations. The installer must follow the installation instructions provided.

A service record must be kept and made available for inspection if required.

The tank must not be modified in any way or used for any purpose other than that for which it was designed.

The water passing through the tank must be potable water (chloride levels <200mg/h)

The warranty does not cover the effects of scale.

The warranty covers any malfunctions which occur within period of warranty resulting from a manufacturing defect. In such cases defective items would be replaced.

The warranty provided does not cover damage, malfunction or service failures caused by:

- Failure to follow GALÚ's installation, operation or maintenance guidelines.
- The installation, repair, modification or movement of the product by someone other than a professional plumber.
- Wilful or accidental damage.
- Inadequate quality/quantity inhibitor in the heating system
- Abuse or misuse or neglect of product.
- Damage to product caused by pests, fire, flooding, lightning, power surges accidental damage, or any other cause that is outside the reasonable control of GALÚ and not arising from the normal operation of the product.

Where it is deemed that the product is defective, GALÚ shall be entitled to repair or replace the tank free of charge, or at the Company's discretion, refund the goods, without further liability to the Buyer. Labour costs up to a maximum value of €750 may be paid by the manufacturer, within the first 12 months of the warranty, where the tank is deemed to be defective under the terms outlined above. Beyond the first 12 months, GALÚ's maximum liability is limited to the purchase price of the product.

GALÚ is not responsible for lost services, cost of substitute services, lost profits, associated with replacement of the tank, expenses arising from third party claims or any other consequential or punitive damages arising from the loss of use or failure of the warranted product to perform.

The buyer and the company agree that in the event of a dispute, all meetings and/or court appearances will take place within the Irish jurisdiction.

To validate this warranty the application form provided must be completed and returned to GALÚ within 30 days from the date of purchase.

Annual Service Log

Date	Engineer Signature	Passed	Action Required / Comments

Registration

Customer Name:			
Address:			
email:			
Tel:			
Installer Name:			
Address:			
email:			
Tel:			
Commissioning Date:			
Tank Serial No:			
All Benchmark checks performed	Yes	/	No
Tank installed in accordance with relevant building regulations	Yes	/	No

Please detach and return to GALÚ or log on to www.galu.ie to register your Thermal Store

Customer Name:			
Address:			
email:			
Tel:			
Installer Name:			
Address:			
email:			
Tel:			
Commissioning Date:			
Tank Serial No:			
All Benchmark checks performed	Yes	/	No
Tank installed in accordance with relevant building regulations	Yes	/	No